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The title is framed by two vertical panels containing woodcut-style illustrations. The left panel depicts a landscape scene with a figure in the foreground. The right panel depicts a figure working in a field, possibly plowing or harvesting.

The AGRICULTURAL EDUCATION Magazine

*"All national wealth depends
upon an enlightened agriculture."*

—Daniel Webster



The Agricultural Education Magazine

A monthly magazine for teachers of agriculture. Managed by an editorial board chosen by the Agricultural Section of the American Vocational Association and published at cost by the Meredith Publishing Company at Des Moines, Iowa.

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Editorial Comment

The New Editor



W. F. Stewart

THE editing-managing board of the *Agricultural Education Magazine* is to be commended for its selection of Dr. W. F. Stewart, professor of agricultural education, The Ohio State University, Columbus, Ohio, as the editor for the magazine for 1944. Dr. Stewart is eminently qualified to carry on this important professional service for *Agricultural Education*.

In these times of confusion, unrest, and doubt, it is well to have a man with long experience in vocational education to direct the destinies of our professional magazine. Wise and experienced leadership is necessary when a large percent of the vocational leaders and writers are in the armed services or are taking on additional responsibilities.

Teachers, supervisors, and teacher-trainers are reorganizing old programs and projecting new plans.

Dr. Stewart is head of the Agricultural Education Department of the Ohio State University. During the past 25 years he has provided an excellent program of teacher education on the undergraduate and graduate levels. The excellent program of vocational education in agriculture in the State of Ohio is partly attributable to the philosophy and effective training of its hundreds of teachers.

Dr. Stewart has been interested in the *Agricultural Education Magazine* from its very beginning. He was elected its first business manager and served in that capacity until last year. Under

his direction the magazine was put on a sound financial basis and during the years has accumulated several thousand dollars now invested in government bonds.

Dr. Stewart was reared on a farm in Illinois and received his undergraduate training at the University of Wisconsin and his doctor's degree at Columbia University. He has had experience in teaching in the rural schools of Minnesota. He has been head of the Department of Agricultural Education of the Ohio State University since 1917. He is a member of Gamma Sigma Delta and Phi Delta Kappa.

Dr. Stewart is married and has three daughters.

Dr. Stewart is not only well versed in the problems of teacher education but also knows his football and baseball. He suffers a great deal when the "Cubs" have a bad year and when the Ohio State team is struggling with 17-year olds.

Appreciation

We would like to express to the readers of the *Agricultural Education Magazine* our sincere appreciation for the assistance given during our period of editing the magazine. The special editors are to be commended for the excellent job that they have done in stimulating the production of articles for the several sections of the magazine. The business manager has been co-operative and sympathetic in dealing with all problems in connection with the financing of the magazine.

There is no finer professional experience that can come to a worker in vocational education in agriculture than that of editing the *Agricultural Education Magazine*. It provides an opportunity for studying the programs of education in operation in all the states of the union. It has been a great experience and one which we have thoroughly enjoyed.

We Are on the Spot

WE ARE on the spot now because of the changed conditions brought about by the war. It is always so in wartime. Every man's work is speeded up to meet the new demands for services and goods. What can we do to aid in the war effort is the question on the lips of nearly everyone. In the case of agricultural education the answer is clear. We must re-evaluate our teaching program to eliminate the nonessentials and emphasize the points that produce the desired results in the shortest possible time.

In some respects we are fortunate. Our objectives have been given much time and thorough consideration by interested and capable workers in our field. These objectives are clear cut and well adapted to the needs of people living in farming areas. Now we must focus certain of them on local farming conditions that need immediate attention. Also, we must make sure that our new teachers are made conscious that we have a set of self-made commandments to guide our actions.

We are fortunate also in having state and local curricula adapted to farming conditions in all the widely different areas. That is, we hope these curricula are well adapted to local problems. Since we are on the spot, suppose we take a look, each in his school, to see whether what we teach is likely to produce results other than just learning.

For instance, this is the time for every teacher of vocational agriculture to make sure that he knows and senses the agricultural problems of his community. A real vocational teacher thinks in terms of farming practices that are good because they produce more pounds of meat and more bushels of grain. He attacks poor farming practices because they lower the economic level of the farmers in his vicinity.

Must Know Local Farming

So today, under pressure from every side, the agricultural teacher must become thoroughly acquainted with every farm and every farmer in his patronage area. He is a good teacher who finds his teaching problems in the real situations on the home farms. Dairy and poultry production may be considerably below the profitable level with the farmers unaware of the

reasons. Disease, due to unsanitary conditions, may be the cause of small litters of pigs and the slow development of those saved. The inquiring teacher compares community production with satisfactory standards and therein finds his points of attack. The books, bulletins, and pictures are just sources of information to be used in solving the problems at hand.

Furthermore, this is the time for every teacher of agriculture to believe in his importance as our agricultural leader. He must make himself known as a keen observer of farming conditions and practices, a planner, if you please, for the economic improvement of the farmers among whom he lives. He must be more than just a teacher of farm boys in a classroom. As a planner and leader, his teachings will carry more weight because he believes in himself. Then, of course, he must become what he believes himself to be.

Higher Salaries

A word about salaries is in order. Agricultural teachers' salaries have gone up, in many cases to unprecedented levels. Of course other teachers have also had salary increases and every boost in pay is justified because living costs are rising by leaps and bounds. But if we are to be realistic we must look at our situation with an eye on the future.

This period of high salaries for agricultural teachers carries with it some dangers that must be recognized. Teachers in other lines of work will often wonder why the teacher of agriculture draws the top salary. And superintendents may shake their heads when they figure the per capita costs for the various classes. There may even be some community antagonism directed at the teacher who draws what looks to the average wage earner like an exceedingly high salary.

The point is not that these agricultural salaries should come down. In fact, we may feel complimented that boards of education will compete for teachers of agriculture and believe they still are worth every dollar of their salary. But what will happen when the war ends and teacher competition again becomes keen?

Probably the answer to the above question is that the salaries of the most valuable teachers will remain at relatively high levels, and the ax will fall hardest on those teachers who

(Continued on page 173)

S. S. SUTHERLAND

Professional

R. W. GREGORY

Long Legs and a Short Bed

A Call to Men in Teacher Education to Accept Responsibilities Comparable to the Needs of the Hour

R. M. STEWART, Teacher Education
Cornell University



R. M. Stewart

IN AN olden time when the leaders of a people had not matched their ideals with comparable responsibility and service, their prophet called them to task, and said, "The bed was too short that a man could stretch himself on and the covering was narrower than he could wrap himself in." The matching of our ideals with a realistic plan of action was never more needed in teacher education than today. The new days bring the need for a re-evaluation of the results of 25 years of service and the formulation of a realistic plan of action. The bed should not be too short!

A man was walking down one of the beautiful streets of his home city. He noticed a painter at work on a rather attractively built house. He noted the care and skill with which the man was working. He said to himself, "That is a fine house, and that painter knows his job." He drew over to the foot of the ladder upon which the painter was working, unnoticed by the painter. He called out, "Hey there! That is beautiful work you are doing. Do you have a strong hold on the brush?" The painter was startled for a moment, but composed himself quickly and said, "Why—why yes, why do you ask?" The man replied, "Take a tight hold, now, for I am going to take the ladder away!"

One time President Abraham Lincoln met a satiristic jab, "How long should a man's legs be?" and Mr. Lincoln replied, as you probably know, "*Long enough to reach the ground!*" Of course, the painter couldn't well have had legs long enough to reach the ground, but he had a ladder. Man has developed many ways of implementing his rise in levels of work and in competence at work and has raised himself even to ethereal atmospheres, but he has never been able to paint the top story of a very large house by holding tight to the handle of his paintbrush, nor by growing legs that are long enough to reach the second story or the 73rd or the 99th. He does have ways, however, of building under himself the solid foundations of support. This is what I am trying to talk about.

What Is Our Problem?

Why all of this background? It is that we may not forget in our teacher education programs that we must more than

ever stick to the basic skills, knowledges, and ideals of the soil and its significance to man, and teach in terms of the experience, the ideals, and the science of living on the land; rather than to pattern our programs so much after the mere conceptual modes of the ultra-conservative, and those who get knowledge primarily from books. There never was a time, at least in modern days, when the opportunities for leadership in agricultural education were greater than now, and when we should regard the significance of the nascent adolescent youth with more scientific accuracy than we have been doing.

The teacher-trainers of the future, as well as the teachers of the future will determine in great part whether farming will be a great cluster of well-knit vocations, with great men in responsible positions, or will be the means only of eking out an existence under the control of other interests. We teacher-trainers gloat frequently over past accomplishments and rest on our laurels, rather than realize that we shall not attract into our leadership of the future the best young men, competent to farm and to lead farming upward, and the best young men competent to become real vocational leaders at the teacher educational level, by being content to pass on mere patterns of present practices.

The Pattern for Us Is One of Growth and Development

The preparation of a teacher involves working with nature in a peculiar way, to bring youth gradually to the relative balance desired in the mature adult.

Because of muscles and other motor structures, the normal child and youth have great potentiality thru growth and development to become all of what they may become. His legs increase in length, and locomotion is accelerated. The muscles of his trunk and legs develop, and we have movements of legs and joints in coordination and skill. Higher brain cells respond to stimulation, and we are rated as intelligent and given a quotient. Man learns to write, to talk, and to paint a beautifully built house. It is this order of growth from the fundamental to the accessory in life that indicates the "processing" of an individual; it is a matter of growing legs, muscles and other motor structures, of growing skeletons to support and digestive systems to nourish, of growing circulatory systems to convey nutriments and oxygen, and to remove wastes, and of growing nervous systems to order and control the organism.

If we accept the two main points of

this discussion: (1) the ideals to be attained by man; and (2) the knowledge of man's growth and development, and of the methodology involved in the "processing," whether child, youth, adolescent, or mature adult, we may then discover what the man with the responsibility of preparing a young man to teach boys, other young men, and adults, must do.

Basic Considerations

1. In any program of teacher education, as in any program of education, the most effective element in the process is that of participation. It stands on a par with other basic elements of progress, and without participation, no other type of study is basic. It is the "sum and substance" of all studies. In these days of basic "this" and basic "that," it is well to remember that "basicness," after all, is determined by the physical, physiological, and psychological readiness of the organism to respond. So-called "general" training may, from the standpoint of the learner, be very accessory in nature because of his lack of experience. Some argue that agricultural subjects should be pushed up to junior and senior years, giving room on lower levels for basic social science, basic language, and basic science. This is sometimes like saying that knitting is better exercise for a little child than crawling and learning to walk. Participation is the *sine qua non* of every discipline. What is there to do is the first approach to the realms of the educated.

2. In a teacher education program, agricultural subjects are basic. To prepare a teacher for teaching boys thru use of agricultural materials, and then leaving out of his regimen of studies at any point in the process, the main feature of his discipline, is pedagogically unsound, yet there are teacher-trainers who regard agriculture as merely applied science. For a program of training in agricultural teaching, it is the most real of all studies. Science, language, social studies, and other studies are contributory. Agriculture is always basic in agricultural education.

3. Then science is basic too, but not always in the form in which the student is most likely to get it in many institutions. There are always at least two aspects to every study and especially of science: (1) where it is the *focus of attention*; and (2) where it is *contributory*. In many teacher-training institutions there is little recognition of (2). I have heard educators say, e.g. "Plane geometry is plane geometry," meaning that there is one course for all who pass thru the schools. You know and I know that "plane geometry" for the entrant into a college or engineering school should be used with more facility than for the entrant into literature and the humanities or into law and the social sciences; and that is not to say that plane geometry of some mode is not valuable for all of us. Values tend to be relative rather than absolute. Science is basic to an understanding of

agricultural studies but always relative to the purpose.

4. The social sciences are basic, but the assumption that six hours in this field are required in the freshman year to prepare the teacher of agriculture for teaching is to teach in terms of the early history of the race before the learner knows where the social institutions of his own community are located, and what his relationships to them are. Here again, there is a strong tendency to put the accessory before the fundamental and to fail to understand what is really basic to a growing boy or girl. Listen to what people talk about and do, and the psychological approach will be evident.

5. Language is basic too, but what language? In this area of study, institutions have tended to err with reference to the needs of college students. Certainly prospective teachers of agriculture are none too skillful in their use of language. Incidentally, at Cornell University, we have a new arrangement in English, the aim of which is to meet the special needs of teachers, and in agricultural education, it is even postponed to the sophomore year in order to have space for agricultural studies in the freshman year. In many institutions, a second year in English under some such caption as the humanities, perhaps limited again to literature, is required. If we regard the welfare of students in terms of the purposes to be served by the agricultural teacher in the school, *linguistics* would command our greater respect, even for the "cultivated" man, than the humanities.

6. Professional subjects are also basic, but speaking figuratively, professional bones, muscles, and digestive systems, etc., must, like the physical, be adjusted to the experience and maturity of the learner, since the student or teacher adjusts relatively rather than absolutely. This with the above five strands (more may be added) make up the characteristic features of the program of teacher education. These strands run entirely thru the period of training and ever afterward, as an integrated cable of preparation, integrated only because part and parcel of the growth and development, of a performing personality, who sees life as a whole.

Integration Thru Participation

Throughout this period of preparation there are at least two propositions, both bi-polar in nature, that are essential and persistent considerations, whether for curriculum organization or for teaching procedure. The strand of participation is the integrating strand that ties all areas of instruction together in unity of function. These two propositions are:

(1) Psychological symmetry of courses taken for each period of preparation, whether by months, terms, semesters, or years; and its other pole, logical symmetry, the accomplishment of ends and goals within the unit of time in systematic form, and

(2) Psychological sequence of courses taken, as the learner moves from one period of the preparation to the next,—and on to the end of the period, as in (1).

In large universities, subjects of studies tend to be abstract—at least self-centered—rather than to serve definite purposeful ends, for which the student selects them. Economy in the administra-

tion of courses has tended to under-emphasize the importance both of psychological symmetry and psychological sequence which are the essence of pedagogical soundness.

It is now a question whether or not we can shake ourselves loose from old conformities that lack reality to recognize the world as it has become, new in many aspects, but pedagogically always the same. If we desire better teachers, we shall have to be, first of all, better teacher-trainers. That may mean better selectors of persons as our "raw material" to work on, as well as more scientific interpretations in the "processing." The only important deterrent of any consequence in matters of this kind is the danger of our becoming allergic to ourselves. When one is allergic to himself, he finds it always best to do the task the easy way for him. The preparation of youth for teaching is not an easy task, and it never was. Let us not be caught in a bed that is too short for us nor with a covering that doesn't cover. Our ideals and our plans of action work in mesh.

Practical Questions

1. *What groups do we intend to serve?* Prospective teachers of agriculture, yes! In these days, however, we must think of teachers for many types of schools and classes; for variety of purposes: teachers of agriculture as a social study for city youth, perhaps, as well as a vocational study; teachers in technical institutes and junior colleges; teachers in all types of special vocational schools and classes related in any way to agriculture; even contributing to the unspecialized services of elementary schools whenever opportunities afford. Then, too, we must aid in recruiting a few of the best teachers for teacher-training and supervision, and with the aid of co-operating members of university staffs, give them encouragement and special preparation as facilities avail. We must not overlook the preparation of administrators, supervisors, and superintendents for schools with vocational departments and classes, in co-operation with the entire vocational staff and the departments of educational administration and supervision.

The training of research workers who have anything to do with agricultural education and vocational education in its wider range command our attention, since we cannot afford to yield this important field to educational leaders unacquainted with the specific problems involved. Extension workers, as well as resident staff members under whom our trainees get instruction, must be reached by our influence, since the way these men teach affects the teacher-product as it goes thru the colleges and out to the public schools. Visual and auditory aids, curriculum and materials of instruction, correspondence studies, special work in centers are again part and parcel of the work of the entire staff. We must co-operate with them. We certainly should not overlook our responsibility of co-operation with other similar workers in public schools, and for special services within our own universities where we work, advisory and otherwise.

2. *What services are we to render?* This seems obvious, but frequently we limit our range too narrowly. The above cataloging suggests types of services. Specifically, we are responsible for the best ways of teaching; we must build our own

courses of study, curricula, and programs to a large degree; we must organize a special type of participation (supervised farming programs, for example), and demonstrate the use of realistic content. Then, too, we must discover the out-of-school groups and make special programs for them with this help, selecting and adapting materials of instruction to their needs, with the aid of extension and resident technical teachers.

We must select and organize the materials of preparation for college leaders, and also prepare supervisors. We must conduct research and promote special agricultural education, special services in public schools, and must assist in other co-operative projects in both rural and urban areas.

3. *What courses should be offered?* It would be relatively easy to catalog these by copying from catalogs. We could say methods, curriculum, administration, supervision, educational theory, educational psychology, measurement, educational and vocational guidance, educational philosophy, research, and other seminars. It is necessary, however, to evaluate these in terms of the purposes to be served in the time available, the total offerings of the training departments, the certification requirements of the co-operating area served, the opportunities for placement, and in general, the welfare of the student and the cause.

One might approach a selection of professional and technical courses under three principal heads: (1) focal and basic; courses dealing fundamentally with the cause for which the students are preparing, emphasizing the experiences that constitute main references of training (agricultural studies, teaching procedures, courses of study, vocational philosophy, special problems, guidance, and counseling); (2) contributory and remedial; courses that provide a framework of reference within which the agricultural studies get their balance for any given purpose (advanced problems of method, visual aids, the social and economic studies, the sciences, the language, the philosophy, the methods of study and research); and (3) mediating and complementary; courses largely for insights, advanced skills, and problems in any fields of education, largely for rounding out the preparation of the student for any given agricultural purpose and level, the opportunity for the student to choose for himself.

Recapitulation

Ideals are fine if based upon firm foundations of reality. The teachers of vocational agriculture are concerned with science dealing with the raw material (the growing youth); with nature which provides the arena for striving; with farming—a vocation of vocations that gives the best expression we know to harmonize ideals and realities; with the process of human growth and development, which is orderly, cumulative, projective, future bound, and powerful, with a dynamic cable of many strands that cross and re-cross within its own growing structure, readjusting from period to period; with a program of preparation made from the incalculable elements from the experiences of man, progressing from fundamental to accessory processes; and the charge to teacher-trainers to turn out fine teachers, and to make the best of themselves.

Methods

G. P. DEYOE

Recommendations for Farm-Labor Training Program in 1944

J. N. WEISS, Assistant State Supervisor of Agricultural Education, Illinois

FARMERS are faced with the problem of producing the maximum of food and fiber in 1944 for the war effort. This challenge is made at a time when there is a limited amount of new farm machinery and a decreased number of experienced farm laborers available. Last year, farmers used their younger boys, older men, women, and girls to get the job done. But in addition to these, there were between 700,000 and 800,000 urban youth employed on farms throughout the United States. Many of them had had no farm experience and no training for the work. Farm-labor training programs were established in many city high schools for non-farm youth in 1943 for the purpose of making these prospective farm workers more effective.

The Illinois training program included 44 city high schools with 2,036 pupils enrolled in addition to the training provided by teachers of vocational agriculture in their respective schools. The following recommendations are based upon a study of results obtained and difficulties encountered in training and placing non-farm youth in 1943. Data were gathered from (1) pupils who worked on a farm last summer, (2) farmers who employed urban youth either as general farm workers or as seasonal workers, (3) instructors in charge of training programs, and (4) farm advisers who were in charge of farm placement. Following are the recommendations which seem most important for 1944:

1. Recruit trainees for farm-labor training program on a basis of their age (14-17),

height (5' 4" minimum), weight (115 pounds minimum), and interest in farm work.

Prospective workers should understand that they are not preparing for a vacation on the farm, but will be expected to work as farmers do, which requires strength, endurance, and interest in farm life.

2. Agricultural Extension Service or the agency in charge of farm-labor placement

should determine the number of trainees which will be needed in each county before training program is started.

School administrators are not interested in offering a training program unless the situation justifies this added responsibility. Pupils are not interested in training for farm work unless they have reasonable assurance that they will be employed when the training is completed.

3. Training program should be started early enough to be completed before the cropping season starts.

Last year many trainees were not available when farmers needed them.



City boys with some training proved to be effective workers on truck farms. These boys are picking beans at Thornton, Illinois



City boys cultivating and weeding carrots. Some "mental conditioning" is an essential part of preliminary training for such jobs

Some were employed by farmers before training was completed, others accepted non-farm employment. Arrangements should be made with prospective farmer employers to use trainees over week-ends for training and tryouts. During this training and try-out period, farmers should provide transportation to the farm, meals and lodging, but pay no wages.

4. Use an advisory council for farm-labor training program.

This council should be composed of 10 or 12 representative farmers in the county, farm adviser (county agricultural agent), or farm-labor placement official, and instructors in charge of training program. Duties of this council may include the following: determine course content, set date on which course should be completed, locate farms where group instruction can be given, secure list of farmers who will provide experience for trainees on week-ends, determine the type of skills to be developed, and arrange for transportation of the group to farms for demonstrations and instruction.

5. Train pupils for the type of farming found in the county or in adjacent counties.

The types of training provided would include (a) general farm work or (b) seasonal labor. General farm duties ordinarily require that the worker live with the farm family and be employed by the month, while the seasonal worker may live at home and work for a farmer by the day or hour. General farm workers should be placed by the farm adviser before training program is completed to permit the trainee to spend week-ends on the farm before rush work begins.

6. Develop in trainees a desirable attitude toward farm work and life on the farm.

Trainees should understand that their work on the farm is a direct contribution to the war effort on the home front. (Maximum food production is necessary to feed our own millions and our allies.) The Federal Government has deemed it necessary to claim a large portion of the food output for our armies and allies. Boys have heard, "Food will win the war," but if they are taking part in its production, this slogan should have a new significance, especially as most of them have fathers, brothers, relatives, or friends actively engaged in the fighting forces—in fox holes, in the air, on the sea, in all parts of the world. Non-farm youth 14-17 years of age can make no greater contribution to winning the war than by conscientiously working on farms in 1944.

7. Encourage non-farm youth to work for farm relatives or friends whenever possible rather than securing employment thru an organized agency.

A survey indicates that trainees make the necessary adjustments to farm life more easily with friends and relatives than with others. However, 86 percent of the 228 youth employed on farms last year who were included in the survey expressed a desire to do similar work in 1944. Sixty-four percent, or more than two-thirds of them want to work on the same farm in 1944.

8. Wage rates for non-farm youth should be in proportion to their capacity to work as compared to adults.

For seasonal work, payment is made on a unit basis. For general farm work

a youth is paid a starting wage considerably under the going rate. Too often farmers fail to increase the youth's pay as his capacity to work is increased. In most cases, it is impossible for the farmer to compete with industry in the payment of wages. Youth will have to charge part of their income to experience of working on a farm and patriotic service, as well as the opportunity of getting out of the city for the summer.

9. Farmers will employ non-farm youth that have had training.

In 1943, farmers were skeptical about the employment of urban youth and accepted them only as the last resort. Trained youth proved to be satisfactory as indicated on a survey of 151 farmers who used them in 1943. Eighty-three percent of these farmers said they would use



Many urban boys developed muscle and brawn in assisting farmers with hauling manure

the same boy in 1944 if he were available. Eighty-five percent of the farmers reported that the training improved the efficiency of the worker.

10. Training program should be scheduled during the school day if possible.

The 1943 program was started so late in the school year that no opportunity was provided to include it in the semester curriculum. Many youth were eliminated from the program because of other responsibilities after school hours. Time devoted to training will be divided about equally between classroom instruction and field instruction. Field instruction will be given in afternoons and on Saturdays. Twenty clock hours of instruction should be the minimum requirement.

11. Parents of non-farm youth should be sufficiently well informed about the program to get their complete co-operation.

Parents will co-operate if they understand the needs and purposes of the program. Some of the things they are interested in are:

- a. Why are city boys needed as farm workers?
- b. What kind of work will they be expected to do?
- c. Where will they be employed?
- d. What will be the rate of pay?
- e. How long will they be needed?
- f. Will they have to work on Sunday?
- g. What type of clothing should be worn?



A 13-year-old boy from Waukegan, Illinois who worked on a farm during the summer of 1943. Altho young and inexperienced he showed a willingness to learn how to do various jobs including loading hay

- h. How often will they get home?
- i. What type of recreation will they have, if any?
- j. What arrangements have been made for pupils to make up school work when excused to do farm work?

12. Farmers will attend an evening school to discuss the most effective methods to use in getting maximum results from inexperienced workers.

Ninety-three percent of farmers that received the pamphlet, "Can You Use This Boy?" said they followed its suggestions. Seventy percent of the farmers, or over two-thirds of them said they would attend a series of meetings on, "How to use non-farm youth most effectively." Some of the problems which they suggested for discussion follow:

- a. Method for checking boys' farm experience.
- b. What should be incorporated in training course?
- c. Ways and means of making it easier for boys to help on a farm.
- d. How to give orders effectively.
- e. How to maintain respect and confidence of the boy.
- f. How to get boys to work on truck farms and like it.
- g. How to compete with wages paid in factories.
- h. Ways and means to get urban boys to like farm life.
- i. Precautions to observe in the prevention of accidents with inexperienced help.
- j. What type of insurance should be secured to cover injuries to these youth while employed?
- k. How to instruct a worker properly for a new job.

13. Require all applicants for farm-labor training to fill out personnel data forms.

These data should be on file in the farm adviser's office to assist in making satisfactory placement. Copies should be on file in the high school to be used by the instructor in charge of the training program. In each case the pupil will secure his parents' or guardian's signature giving consent to enroll in the labor training program and to accept farm employment. The form as shown in Table I is suggestive and was used satisfactorily last year.

Recommendations for Seasonal Farm-Labor Training

Questionnaires returned from 72 farm operators that employed about one-fourth of the non-farm youth placed in Illinois in 1943 indicate that both physical and mental conditions are essential to success of a seasonal worker.

1. Seasonal farm workers should be recruited and trained for special types of work.

Requirements vary for different types of work. Corn detasseling and work on truck farms can be done by younger boys and girls and by women. Approximately 70 percent of employers can use workers under 16 years of age. Seventy-six percent of employers indicate they can use girls in place of boys. Many of the workers lived at home and were transported on day hauls to the job.

2. Mental conditioning and training of workers for seasonal jobs can be done in the classroom with groups.

Instruction will be supplemented with charts, motion pictures, and demonstrations.

3. Work supervisors and labor-gang foremen should be encouraged to use Job Instructor

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Supervised Practice

C. L. ANGERER

County Wide Pig Club

ELVIN THUE, Teacher, Worthington, Minnesota

THE Jackson County Pig Club, the only county organization of its kind in Minnesota, is an organization instrumental in making the county the leader in ton litter and market litter work.

Organization

The club had its origin in the middle thirties, just following the period of extremely low market prices for hogs and was founded by agricultural education leaders of the county, Mr. Orfield, instructor of vocational agriculture at Lakefield; Mr. Wilkinson, instructor at Jackson; and County Agent Mr. Huntsinger. The Kiwanis Club of Jackson assisted in the promotional program and is still doing a great job despite the fact that the size of the group has greatly increased. The Kiwanis Club invites the boys who successfully complete their projects to a banquet each year. Parents of the boys are also guests together with the Kiwanians and their wives. Special prizes are awarded those who have accomplished the most outstanding work. Thirty-five dollars divided into suitable awards are given to those ranking at the top, and this has been a stimulus to the boys to do better work.

Foremost in the minds of the sponsors and the supervisors was the desire to increase the number of members and to improve the pork production in the county. Better records have resulted because strict rules and regulations are formulated and adhered to.

The Plan

Litters of pigs in the contest must be farrowed between February 15 and May 15. The deadline on farrowing is set in order that the project can be completed by November 15. The pigs farrowed are all earmarked, either by one of the agriculture teachers, county agent, or some disinterested party in the presence of a witness. This must be done when the pigs are no more than seven days old. The pigs also must be kept separate from all other pigs on the farm, except when two from the same family are members. No other pigs on the farm may have the same earmark.

Each boy begins a feed record on the pigs and the sow the day of farrowing. This makes all of the records uniform as some of the boys will own their sow for a longer period, preceding farrowing, than others.

All of the pigs are weighed at 56 days or within five days of that date, in the same manner that the pigs are earmarked, that is, before witnesses. At 180 days the pigs are sold thru the regular market channels and the weights are recorded. The pigs must be sold within 10 days of the 180-day date and two pounds per day are added or subtracted

for each day away from the exact date.

New Features

Some new features are added from time to time as was done in 1941. Originally the members could use only the pigs from one sow. Because some of the sows would have only six or eight pigs many of the boys would drop out feeling that they could not compete with boys having 10 pigs. This induced the sponsors to alter the regulations and allow members to add other pigs from the farm to total 10. For an example, one member has a sow with eight pigs at 56 days. Two pigs can be added and specially marked at 56 days. These added pigs must not average, in weight, more than the average of the original litter. This idea was advanced by Mr. Orfield, then county agent, was approved by the supervisors, and is now in use by the State of Minnesota as a "Market Litter Project." This feature is very valuable as members who have a sow that farrows a litter of eight pigs have an equal opportunity with those with 10 pigs in their litter. A maximum of four pigs can be added to any one litter.

Good Practices Followed

All members are encouraged to introduce the most modern approved practices of sanitation and feeding. It is estimated that between 80 and 90 percent of the boys use the best known practices and

this accounts for the outstanding results.

Results

No attempt in this account will be made to show comparable results from year to year, however, a summary of the results of 1942, the last completed, reveals that the Jackson County members did a wonderful job of producing pork. Twenty-eight of the boys made a record of over a ton of pork from their litters by the time the pigs were 180 days of age. Two hundred pigs of these litters averaged 223.3 pounds, making a total of 63,421 pounds. The heaviest litter weighed 2,831 pounds, and was raised by Merle Kolander of Lakefield with 12 pigs in the litter. Runner-up was George Koster of Round Lake with 2,705 pounds from 11 pigs. Conrad Hussong of Okabena took third with 2,610 pounds from 12 pigs. Heaviest average weights per pig were very outstanding. Harlan Steffen, Lakefield, 258.8 average for 10 pigs; Milton Pietz, 250.8 pounds average for 10 pigs; Curtis Hansen, Lakefield, 248.5 pounds average for 10 pigs; Warren Rademaker, Okabena, 246.5 pounds average for 10 pigs; George Koster, 245.9 pounds average and Joseph Vancura, Lakefield, 242.0 pounds average. All six of the leading members in average weight surpassed the highest marks of previous years.

The supervisors of this project for 1942 were Rolland Abraham, county agent; Joseph Raine, agricultural instructor of Jackson; George Berg, agricultural instructor of Okabena; and Elvin Thue, agricultural instructor of Lakefield. These men are proud of the way in which the project is functioning and of the outstanding results attained by the members.



Harlin Steffen of Lakefield with his 10 pigs that averaged 258.8 lbs. each at 180 days. He had the highest average in Jackson County, Minn. in 1942.

Supervised Farm Practice Programs

FRANKLIN E. HEALD, Supervisor of Teacher-Training,
Massachusetts

SINCE vocational education in agriculture is set up for those "persons over 14 years of age who have entered upon, or are preparing to enter upon the work of the farm" and the "controlling purpose" of such education shall be to fit for useful employment" the valid test of the success of such education must be in terms of these objectives. Studies made of the subsequent employment of such persons as have received such education indicate a fair degree of success, excellent in some localities and poor in others.

Wherever the percentage of former pupils seems too small or the success of the trainees is too slight, we may assume that the school admitted too many who were not committed to the objectives or that the instruction has not been proper for the purpose. In some cases, both of these faults appear to have functioned.

Selection

In this article, it is not our purpose to discuss the selection of prospective pupils. This is very important. We all admit that some applicants who are sincere will find during the first year that they err and will change to other courses. If the courses have been sufficiently "vocational," we cannot criticize this inevitable guidance function, providing the preliminary guidance and selection were adequate. The proportion of such shifts should not be large but boys of 14 or 15 years are in a transition stage. Eighth grade guidance should have been very skillful.

For the larger group who had good reason to enter upon this training, and especially for those who persist for three or four years, the establishment in farming or in responsible farm employment appears to be the primary test of the effectiveness of the teaching.

To this end, the boy should be engaged in farming from the beginning and his long-term plan should be set up at the outset so later modifications must be expected. The plan should look forward 10 or more years, in terms of the opportunities in the area. Then his plan for the current year should be worked out in such detail as to involve supervised farm practice for about 12 months.

Instruction Should Be Built on Farming Program

The instruction of the year should grow out of the farm practice. New skills and new management decisions should go hand in hand. The teacher should be an adviser, and this calls for constant knowledge of the progress of each enterprise. Much of this should be gained by on-the-spot observation. The most valuable teaching is done on such visits and, therefore, agricultural teachers must teach all summer if they would succeed.



F. E. Heald

This instruction on the farm is just as important after the boy leaves school. He is seldom established for several years after his formal schooling ends, but his most serious problems are met in this early post-school period.

Some educators appear to act on the assumption that the agricultural project, enterprise, supervised farm practice, or whatever you may call it is a laboratory application of the teaching of the course. Indeed, some pupils are impressed with the idea that the project is a penalty which they must pay if they enroll in the department of vocational agriculture. In so far as the work has been successful as vocational education, the reverse of this point of view has prevailed.

The farm project or enterprise has been entered upon for the purpose of securing a start in farming or of improving the farming in which one is already engaged. This calls for planning, and planning requires a knowledge of facts. The study originates in the problems which the enterprise presents. Each step leads to new problems as long as the learner lives. There are new skills or better skills involved which are acquired by farm practice, preferably under supervision by a competent guide whom we call the teacher.

Getting Into Farming

The learners may be grouped into three classifications:

1. Farm boys who may have the opportunity to become partners with parents or otherwise may have an assurance of ownership.

2. Farm boys who will have to seek ownership elsewhere, frequently the hard way.

3. Town boys without even the skills which the farm youth acquires early and with no promise of financial backing. Employment as laborers must be their supervised farm practice, and a long road to establishment must be planned. At first skills alone are the aim but most of them will aim at eventual ownership. Farming as "a way of life" lures them.

With boys of all of these groups in one school class, we may be tempted to teach principles, hoping that each will apply the lessons to his own need. If, however, we begin by starting each boy at once on his farm practice, the demand for the principles will be recognized by the boys. The farm boys will assist the town boy to secure his skills as they work together and both will profit thereby. The farm boy will encounter management problems and the class discussion of these will add reality to the principles for the classmate who has not yet a responsibility for management.

The instructor who has a program for a systematic follow-up of former pupils discovers that two chief obstacles exist. The financial difficulty in moving toward ownership is closely linked with the problems of farm management which never become very real until the person has real responsibility. When the instructor assists these young out-of-school farmers to solve these difficulties, he comes back to school with his feet on the

ground. The instruction of the in-school youth improves measurably from his contacts with the older youth, especially if his teaching centers about farm practice as we have previously advised.

In our State Department of Education, we have periodically challenged all of our policies and procedures and have frequently applied the acid test to both our objectives and our accomplishments. On one of these occasions, Director Small asked me to set up for him the aims of vocational agriculture as I understood them, and to indicate those to which objective tests might be applied.

The following is a copy of the part of my report which stated the aims. No substantial change would be made today to cover a similar request:

Objectives in Vocational Agriculture

1. To help the farm boy, who is inclined to remain on the farm, to keep his faith in this vocation. Difficult to test but very important.

2. To help the boy who remains in the course for a reasonable period to acquire a foothold in the farming business more rapidly. (An average net gain of 10 years of time in securing ownership for the boy who completes the course.)

3. To help the urban boy who thinks he wants to be a farmer to secure the opportunity to test this out instead of just learning about farming.

4. To improve skills and to acquire new ones.

5. To develop judgment regarding what to do in the perennially changing combinations of weather, plant growth, insect pests, glutted market, and other factors.

6. To become habitually more observant of phenomena in plant life, insect depredations, etc., which are vital but which the average rural boy seldom sees. Ability to identify and explain is involved.

7. To find in other observations in natural science an appreciation, the joy of which shall in a measure compensate for the isolation of farm life.

8. To learn to turn a loss or a narrow profit in farm projects into a safe profit by better management.

9. To learn how to use the references and sources of information to solve new problems and meet new situations.

10. To fix certain basic facts (subject to later modification).

Since farming is not merely an occupation but also a mode of living, all of these objectives are valid, but on the vocational side the objectives of greatest importance center around establishment in more successful and more satisfying farming. The process of arriving at such a goal is largely that of successive experiences accompanied by learning. "We learn by doing" still holds true.

Planning the Practice Program

During the school years, the critical phase of each enterprise is in the preliminary planning, especially the budget estimates of expenditures, labor, and probable income. How large an enterprise is feasible? Can it be financed? Will the probable labor return be adequate earning for the boy? Can he forego immediate return? How much labor will be involved and how will this labor be found? Is it within the boy's capacity at

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E. R. ALEXANDER

Farmer Classes

W. H. MARTIN

Evening School Builds an Industry

L. R. HUMPHREYS, Teacher Education, Utah

THE farmers of Moroni, Utah, fattened 310,000 turkeys this year for marketing. This flock of birds represents 60 percent of the production of the whole county of Sanpete of which Moroni is a part, 23 percent of the production in Utah (sixth in the U. S.), and approximately one percent of the total turkey production in the United States. It is not too much to say that no other community in the United States with a population of 1,150 has equaled this production. Furthermore, Sanpete County if not the largest county producer of turkeys in the United States is near the top. Behind this accomplishment there is a unique evening-school program.

Size of Program

For the town of Moroni this industry meant the production of 5,125,000 pounds of dressed turkeys for 1943, the importation of 400 freight cars or eight train loads of feed in addition to the feed used from the local area, the establishment of a \$1,500,000 industry in the community, an investment in equipment by producers of \$600,000, and a seasonal payroll outside of regular employees of 200 people. This phenomenal growth has taken place in the short period of 10 years. Several factors have played a part in this remarkable development.

High-School Boys Started the Project

In 1929, Marian Jolley, a sophomore in high school, produced 600 turkeys with a substantial profit. At this time, there were no commercial flocks and but few small farm flocks in Moroni.

Two years later two other high-school boys and Eldon Westenskow, the teacher of vocational agriculture, expanded these beginning efforts in turkey production. Many problems were encountered in these beginning efforts. The growers were encouraged to bring their problems and enroll in an evening class in turkey production with agricultural instructors, Westenskow and Kelsen at the Moroni high school. The first evening class was held in 1935. The farmers in this and

subsequent classes have given consideration to the problems of feeding, housing, disease control, improved breeding types, marketing, and the construction of feeders, range houses, trailers, and other equipment essential to turkey production.

The local Lions Club sponsored an annual *Turkey Day*, in co-operation with the agricultural teachers. Each year national authorities, including such men as Cline of Nevada and Alder of Utah, were brought to Moroni on *Turkey Day* to point the way for improvements in the industry. Carefully planned excursions in the turkey-producing areas presented opportunity for study of many improved practices. General interest was aroused in



A typical flock of turkeys, an outgrowth of an evening class. Moroni, Utah



Harvey Madison and his flock of turkeys, Moroni, Utah

the turkey-production enterprise and a new industry was born in this part of the state.

Organizations Result from Instruction

While much of the time in the evening classes in the earlier years was devoted to such problems as feeds, feeding, and disease control, the turkey growers soon began to realize the need for co-operative effort in this enterprise. One of the outcomes of the evening school was the organization of a Co-operative Processing Plant. The 65 members of this organization are all young men, the majority of whom have studied vocational agriculture in the Moroni high school. A number of these men raised turkeys as their first project in all-day agriculture classes. Some of the growers contracted with a flour mill to mix feeds. This effort later developed into the organization of the Moroni Feed Company. The sum total of all these efforts has resulted in a unique organization with three separate departments, (1) the feed mixing plant, (2) the turkey processing plant, and (3) the farmers co-operative service for the

Training Teachers for Adult Programs After the War

H. W. SANDERS, Teacher Education, Blacksburg, Virginia



H. W. Sanders

sale of gas and oil. Each of these departments has its own management and each operates its own budget with separate accounts.

It is taken for granted that the members of this turkey co-operative will enroll in an evening school each year to study the many intricate problems in turkey production. As a result of long experience and co-operative study in these evening schools, many improved practices have been adopted in this growing industry. These improved practices include the following:

1. The organization of a co-operative for the purpose of mixing feed, processing the turkeys, and purchasing equipment, oil, and gas.

2. The use of screened porches in front of the brooder and screen platforms within the brooder to prevent any contact of the bird with the droppings.

3. The adoption of tested feed formulas recommended by Alder of the Utah State Agricultural College.

4. The use of the range house to confine turkeys from six to 12 weeks of age resulting in increased efficiency of equipment and making it possible for a new brood every six weeks.

5. The discovery and desirability of adopting the practice of increasing the amount of alfalfa meal in mash up to 15 percent.

6. The early recognition of the value of broad breasted turkeys in the turkey-production program and the purchase of this kind of stock.

Large Flocks

It should be said that one of the outstanding practices in the turkey production in Moroni has been the development of large flocks. Many of the present flocks will range from 2,000 to 5,000 birds. On a basis of the experience of these producers, it would seem that the most economical unit is about 3,000 birds. Flocks larger than 3,500 are not usually economical. Large flocks suffer for the lack of individual care and proper inspection. Smaller flocks increase the overhead expense. The majority of flock herders use the trailer house or sheep wagon for living quarters. The turkey becomes accustomed to following the camp trailer or sheep wagon from place to place.

During the present year 16 of the large turkey producers availed themselves of the evening courses in farm mechanics with Instructor Kelson for the purpose of building new and desirable equipment. These men constructed feed troughs, screen porches, feedboxes, and other types of equipment. The farm mechanics shop at the Moroni high school is used to full capacity both during the regular all-day school and the evening-class periods for the construction of such equipment. Last year approximately 40 screen porches were constructed in a period of six weeks. Feed troughs numbering 1,800 of various sizes were also constructed. Nearly all of the equipment constructed in the evening schools was made from native lumber from the Manti National Forest.

Turkey Processing Plant

The co-operative turkey processing plant has a capacity for dressing 4,300 birds in a 12-hour shift. This production requires 225 pinners, 15 for roughing and 20 additional workers in different

AT NO time in the history of America have so many people been concerned with plans for the post-war world. As individuals and as a nation we seem to be in agreement that when the war ends we shall not be caught "flat footed." Thoughtful people who are quite confident that we will win the war are not quite so sure that we will win the peace that follows the war, but they are sure that careful planning is essential if we hope to gain the second victory. It is reasonable to assume that the more a given program has been affected the more planning must be done to "weather" the continuing emergency that may reasonably be expected to exist when the actual conflict is over. Altho the war has affected the entire program of education in many direct and indirect ways no phase of the program of vocational education in

parts of the plant, making a total of 260 workers during the heavy processing periods. The pinning of birds is done on a piece basis, 10 cents is paid for hens and 14 cents for toms. Some people become very proficient in pinning birds and make as much as \$15 a day. The pay roll for this plant is approximately \$30,000 for the season. The cost for processing turkeys is three cents per pound with a refund in ordinary years of three-quarters of a cent to members in terms of stock certificates of interest.

The processing and marketing of birds is an individual affair. Each member of the co-operative is assigned a date on which his birds are to be processed. The processed birds are graded rigidly by a competent turkey grader. In normal years the Federal government has furnished an expert grader. The average grading for this plant is:

Prime birds 65 to 70 percent
Choice birds 25 percent
Commercial grading 5 percent

Instead of pooling the dressed birds as would be expected the turkey producers receive bids from several representatives from the various companies which buy dressed turkeys. Most of the turkeys produced in the Moroni area go to the New York market. Some are sent to the West Coast because of a freight differential. The buyers send their field men to contact individual growers.

The spirit of co-operation of the turkey producers of Moroni, the unique co-operative which ties the community producers together, the low cost of the feed, the fine leadership offered by the local high school, the improved practices adopted by the producers, the high quality of products turned out by the turkey processing plant, the effective method of marketing by individual members—all of these factors have played an important part in the development and growth of one of the most unique turkey-producing communities in the United States.

agriculture has been more seriously affected than that of adult education. Therefore, it seems especially appropriate that some consideration be given this part of our work.

The Program for Adults

Among the many questions that may be asked concerning the plans for adult education in agriculture may be included the following: Of the various phases of the Rural War Production Training Program which are most likely to be retained? What qualifications must the teachers in the postwar period possess? What procedures should be followed to prepare these teachers properly for their jobs? An attempt will be made to answer these questions partly. The answers may not be the correct ones, but they are offered for what they may be worth. There are at present too many "unknowns" for us to be certain that we can balance the equation.

We have learned from our recent experience that instruction that has met an evident need in the lives of rural people has been popular and successful. Farm machinery repair and food production and conservation stand at the top of the list. In some instances certain commodity production courses have held the center of the stage, their popularity seeming to depend upon the quality of instruction, the local demand, and the elements of newness involved. Courses 1, 2, 3, and 4 of the Rural War Production Training Program now seem to be serving a different purpose from that which they did in the beginning. Rural youth are not going into industries in such large numbers and those who receive training in these courses are using it as a means to an end rather than an end or aim in itself.

What to Keep

What, then, may we expect to be retained of this program? Farm-shop work, in all probability, will emerge from the war as a full grown and more practical phase of the vocational program. Adults who have learned to use the equipment of the school shops to do farm machinery repair work and to do essential jobs of construction will doubtless want to continue to do so. They will need further instruction and supervision in their work and new members may be expected to desire the same opportunities for training. Should special funds be withdrawn there may develop considerable demand for evening classes in farm-shop work taught by the teacher of agriculture or a special assistant provided for from local and state funds. A similar situation may be expected with respect to food production and conservation courses. We are already beginning to see the wisdom of making this work primarily educational.

Adults who have been trained will be able to meet their own needs with relatively little assistance from the teacher, but new recruits may be in need of instruction, possibly on an evening-class basis. Already some evening-school courses are including meat processing as

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Farm Mechanics

L. B. POLLON

A New Concept of the Farm-Shop Program for High-School Boys

HAROLD T. HAYNES, Teacher of Agriculture, Vermont

THE effects on the day-school program of farm machinery repair courses operated under Rural War Production Training in farm shop are now becoming evident. It is yet too early to determine the total influence of this program; however during the past year I have noticed in the work of my students a great improvement, which I attribute to the development of farm mechanics courses for adults. This improvement has occurred in four areas:

More skill and knowledge acquired
Increased confidence in students
Improved working habits developed
Growth in creative thinking and resourcefulness.

Adults Stimulate Youth

The Rural War Production Training courses made possible the improvement of farm-shop equipment. This alone has had a tremendous influence on high-school groups. When the boys' fathers and other adult farmers in the community learned to operate the welder and other pieces of equipment, the boys too determined to develop this ability. The students have come to recognize the importance of knowing how to use all of the tools which are useful in repairing and constructing of farm machinery and equipment.

As a result of seeing man-sized jobs accomplished in farm machinery repair and construction classes by adult farmers, the students have gained increased confidence. The general reaction of the students has been a great increase in willingness to undertake larger farm-shop projects. Prior to the time of adult classes, it was difficult to get much farm equipment other than saws, harnesses, cultivators, and similar small items brought to the farm shop. Now the boys do not hesitate to bring in corn harvesters, manure spreaders, and other farm machines. The construction of lime spreaders, tractors, wagons, and other equipment has come to play an important part in the farm-shop program. Students have not only gained more confidence, but many have become deeply interested in this new type of farm-shop activity.

Better Farm-Shop Projects

The development of the proper work habits has long been recognized as one important phase of the farm-shop program. Most students have, as a result of work on real farm machinery problems, developed improved habits. They have learned to check the machines, analyze the needs, and make the repairs in a workmanlike way. Students as a result of working on these larger problems have set higher standards. In many instances the comparison of the work being done

by their dads and themselves has been possible. The students have endeavored to reach a proficiency level equal to that attained by adults. In addition to the specific improvements in work habits the boys have attained new interest in a study of the principles on which various farm machines operate.

A great stimulant to creative thinking has resulted from working with equipment and with groups of farmers. In general the youth have demonstrated a greater creative ability than the adults. Time and again they have made improvements or developed new ideas on labor-saving equipment and methods of construction. It has been a real pleasure

to note the improvement in design and construction of items during the past year as a result of the new interests and ability of all-day students.

Long-Time Results

The Rural War Production Training course in farm mechanics appears to have had an excellent effect on the all-day program. It seems probable that this will also have a good effect on the farm-shop program and on the total vocational agriculture program. I believe that we shall see an increase in the percentage of time devoted to the teaching of farm machinery and an increased enrollment in agriculture courses. This will enable high-school students to acquire a more adequate training in farm machinery repair and farm mechanics and will better prepare them for the vocation of farming in the postwar period.

What Will Be the Demands for Farm Machinery Repair?

HOWARD PERINE, Teacher
Tygart Valley High School—Mill Creek,
West Virginia

FARM machinery operation, care, and repair have always had a place in the vocational agriculture program; yet with a varying degree of emphasis, depending upon the training, philosophy, and influence of the teacher.

In many instances in the past the programs have been inadequate because of insufficient working space and a lack of tools with which to carry on a suitable teaching program. Today, largely due to the national emergency, most of these handicaps have been overcome. Today, the farm machinery program stands at the highest peak of importance.

Need for a Long-Time Program

Since the farm machinery program has reached this peak, it is the urgent business of all those who direct the program to steer it towards sound policies. In nearly every community the farmers are asking for machinery repair courses. This need is a direct outgrowth of the existing shortage of farm aids. The farmers are suddenly alert to the fact that such vital machinery has frequently been discarded long before the actual life of it has been expended. The census report of 1941 shows that the average life of all machines is 15.2 years. Farmers are finding that by the aid of repair programs machines can be made to last much longer and that in the future the average life of implements will likely be considerably greater.

The "cost per bushel" is the primary interest of each and every farmer. He is more acutely aware that with added oil, paint, grease, and careful operation of

his machine he is lowering that cost per bushel. This fact is becoming more and more evident each time a machine is repaired and placed in service. Having once become conscious that machines will last longer, the farmer will more than likely place additional value on old machines. As a result of this demand by the consumer, the farm machine companies may eventually be required to build sturdier products.

In the light of accumulated experiences to date, it is believed that the farmer is going to expect a more rigid training for his son in the vocational agriculture department at school. In communities not in direct contact with farm machinery repair centers, the boys are carrying back from the educational institution, vital experiences to their fathers. They are gradually assuming the role of guardian of the home farm tools, as well as rendering valuable services to neighboring farmers. Because of this specialized training, the boys are being permitted to operate machines and are developing in themselves a much greater interest in the farm.

Why Boys Want Shop Experiences

Every day, more and more farmers' sons are giving as their reasons for seeking the training in the vocational agriculture department: (1) desire to participate in the newly developed farm shop and machinery operation, care and repair program, (2) the hope of becoming mechanics. The work shop must satisfy both urgent needs. All of this adds up to more emphasis on farm machine operation, care, and repair. Boys are developing a greater sense of responsibility; they are showing a keen interest in the home farm program. This, will bring about better farmers.

It is a difficult task to look into the future and to plan a perfect farm machinery program, but some type of program must be formulated.

Editorial

(Continued from page 163)

have been skating along with a limited program that has never made an impression on the community.

Teachers of agriculture are on the spot now because under pressure their salary increases have been large. The wise teacher will proceed at once to make himself so valuable that boards of education will hesitate to reduce his pay for fear of losing his services.

F.F.A. Program

This means, of course, a strong F.F.A. chapter with a program of activities that cannot be overlooked. It means also classes for adult farmers and for young farmers in addition to the regular high-school classes. "Too much," says one teacher. "There are not hours enough in a day." But the teacher in the next town is carrying just such a program and the farmers recognize him as a valuable man

in the community. When the war is over, this last teacher will find that his record speaks for him in the face of a general tendency to reduce expenses. We are on the spot and must be realistic.

One more point and I shall be thru. In many states there are clubs of "10- and 20-year teachers"; teachers who have been on the job for 10, 15, and 20 years, giving real service and liking their jobs. For the good of vocational agriculture the membership in these clubs should increase.

We are on the spot today because agricultural communities value and want departments of vocational agriculture. It is a time for consolidation of our resources to make sure that our position may be strong when the war is over and the campaign for expansion gets under way. The closed departments must be reopened and others added to the list. Our chances for steady growth when peace comes will depend on how we carry on during these troublesome times. We are on the spot now. H. E. B.

Instructor in charge of program.
Farm adviser or his farm labor assistant.

Farmer who employed a successful town boy last summer.

A town boy who had worked on a farm successfully last season.

The superintendent of schools will give the introduction and explain the need for farm workers.

The instructor should explain the plan for conducting the training program, content of the course, and practical experience given them by (a) field trips to farms with the teacher on Saturdays and (b) demonstrations of important seasonal operations.

The farm adviser, or his labor assistant, will explain how placement will be handled in the county.

The farmer would show how successfully a town boy had worked on his farm, and how the prospective enrollee could serve on another farm when he is properly prepared.

The town boy could describe some of his experiences and some of the advantages gained in working on a farm the past season.

Enrollment would then be made of boys interested in the program and willing to work on a farm the coming season.

2-C Classification Farmers Go to School

C. C. SCAROBOROUGH, Subject Matter Specialist, Auburn, Alabama

"REALIZING that many of the young men deferred for farming by selective service were former students of mine, I felt that they would make an ideal evening school group," stated B. P. Dilworth, teacher of vocational agriculture at Enterprise, Alabama.

This statement was in answer to a question as to the reason for organizing two of the first evening classes organized in Alabama especially for young men in 2-C classification. Mr. Dilworth secured the names of all such young men 18-25 years of age from the local selective service board and found that he had a list of 28.

A look at the records of the young men making up these two groups proved interesting. Four hold the State Farmer Degree, one planning to apply for the American Farmer Degree this year. Six are still active F.F.A. members. Nearly 80 percent of the young farmers enrolled are former students of vocational agriculture and F.F.A. members.

The groups were organized with the president and secretary elected by class members. After the groups had met a few times, Mr. Dilworth points out that this discussion often revolved around their "2-C position" in the community. Frank and open discussion of this problem seemed to boost the morale of the entire group.

Mr. Dilworth listed the following as the major results expected from the meetings of these two groups of young men now farming as their part in the war: (1) to increase their contribution to the war; (2) to grow into farming on their own; (3) to become better community leaders because of their experience in working together on common problems; (4) to become better citizens as a result of their broader understanding of world events.

Labor Training Program

(Continued from page 167)

Training technique in teaching workers new skills.

Normally, farm foremen are efficient workers, experienced in farm tasks, but not good teachers. The use of J. I. T. techniques will give the supervisor a few simple rules to follow, and make his instruction effective.

4. Recruit non-farm youth for farm labor

in larger towns.

Most towns of 5,000 or less in population do not have a surplus of non-farm youth available for farm labor. The Illinois survey revealed that almost two-thirds of the group came from cities of over 25,000 population. Most of these youths were between 14 and 16 years of age. Factories would not employ them until they were 16 years of age.

5. Plan procedure to follow in a school where there is need for a training program.

Call a meeting for all city boys in school with the following speakers:

School superintendent.

TABLE I
NON-FARM YOUTH—Pre-employment Record for School and County Farm Adviser

Name.....	Date.....
Print (Last) (First) (Initial)	Age.....
Home Address.....	Telephone No. { Own..... Neighbors.....
Name of School.....	Present Grade..... Date of Birth.....
Height..... Weight.....	Sex..... { Protestant..... Catholic..... Other.....
Color..... Nationality.....	Did you work on farm last year?....
Trained for general farm work.... Seasonal....	Address..... For how long?....
Name of farmer.....	Farm machines operated.....
Kind of work performed.....	For how long?....
Date you will be available for farm work.....	Seasonal work.....
Prefer full time work on one farm.....	
Must applicant live at home? Yes.... No....	
Can be live at job? Yes.... No....	I hereby indicate my willingness for this student to be employed in agricultural work in 1944.
Health condition: Good.... Fair....	
Able to do heavy work?.... Light work.....	
Signature of Pupil	
Instructor's rating of boy's interest, attitude; Good.... Fair.... Indifferent....	
Comments on boy's ability:.....	
Signature of Parent or Guardian	
Signature of Instructor	

Employment Record (Reverse of Card)

Date employed.....	Wages received by day.....	By month.....				
Employer.....	Name.....	R.F.D.....	Town.....	State.....	Tel. No.	County.....
Type of work.....	Reason.....					
Date of resignation.....						
Comments made by employer.....						
Remarks of boy.....						
Suggestions for improvement of training program.....						
(Duplicate these data for successive periods of employment)						

Studies and Investigations

C. S. ANDERSON

A Study of the Proficiency of Beginning Teachers in Technical Agriculture

C. E. RHOAD, Department of Agricultural Education, The Ohio State University

CAN a teacher teach others to do the things that he cannot do? Do our beginning teachers of vocational agriculture really "know their stuff"? Is the term "book-farmer" as applied to teachers of vocational agriculture a proper one?

Teachers of vocational agriculture deal directly and positively with the farm business of their high-school and adult students. They accept and proceed on the philosophy that it is their function to produce changed individuals thru changed farms and methods of farming. That teachers have failed to bring about needed changes is due, in part at least, to the fact that they themselves do not have the abilities that should be developed in their students. The training teachers in the five training schools maintained by The Ohio State University for the purpose of providing student-teaching opportunities in vocational agriculture, have expressed the opinion that the trainees with whom they work lack proper preparation in technical agriculture.



C. E. Rhoad

Purpose of Study

This study was undertaken in order to determine the soundness of the criticisms mentioned in the preceding paragraph and thus find out if there should be an improvement in the technical preparation of prospective teachers of vocational agriculture. In other words, this was a study of the comprehensiveness of abilities in technical agriculture possessed by prospective teachers of vocational agriculture in Ohio previous to their entrance into student teaching. It was also the desire of the author to conduct this study in such a way that, in case there was need for improvement in the preparation of prospective teachers, there would be available for future investigators methods of procedure by which they might make supplementary studies. Since prospective teachers acquire many abilities in technical agriculture outside the College of Agriculture, one of the purposes of this study was to provide a basis for guidance of prospective teachers so that they could secure adequate farm experience. A further purpose of the study was to provide a basis for determining the courses and course content in technical agriculture that prospective teachers should experience in college before entering the profession of teaching vocational agriculture.

Procedure

In order to achieve the purposes just stated, two types of investigations were made. The first investigation was a study of eight types of abilities contributing to the efficient production of swine. The author made up a tentative list of abilities that prospective teachers of vocational agriculture might be expected to possess previous to their entrance into student teaching. The technical specialist in swine, a member of the faculty of the College of Agriculture, revised the tentative list of abilities. This revised list was then presented to the five training teachers who eliminated the abilities that they felt were either not needed by teachers of vocational agriculture or could be acquired after they entered the profession. Those abilities remaining on the list were considered essential. The author then constructed tests to determine if these essential abilities were possessed by the 26 seniors majoring in agricultural education during the 1942-43 school year. War demands for men reduced the contemplated list of 90 prospective teachers to 26. The tests were taken by the men on the first day of the quarter in which they were enrolled in student teaching. Since only two of the 26 men enrolled in additional swine courses, it seems reasonable to conclude that this study indicates

the abilities in technical agriculture possessed by these men at the time of graduation excluding, of course, those abilities acquired while in student teaching.

Findings

It was found that the group of 26 trainees possessed, on the average, 54.2 percent of the essential abilities relative to the swine enterprise. Individual scores ranged from 38.5 percent to 75.0 percent. Table I shows the scores made on the eight types of abilities.

It is the opinion of the author that the success of a swine producer depends to a large extent upon his ability to make managerial decisions. This involves the converting of the findings of experiment stations and the experiences of himself and others into a workable plan of action for his own farm. Once the plan of action is formulated, the producer must be able to carry it out, otherwise the plan is useless. This requires manipulative abilities. It was in these two vital types of abilities that the prospective teachers scored lowest.

The second investigation was a survey of the manipulative abilities in many areas of technical agriculture possessed by the 26 prospective teachers. Eight hundred thirty-five manipulative abilities which prospective teachers might be expected to possess were listed by the author and the technical specialists on the staff of the College of Agriculture. The five training teachers decided that 557 of these abilities should be possessed by student teachers previous to their entrance into student teaching.

TABLE I
Average Scores Made by the Twenty-six Prospective Teachers on the Eight Types of Abilities in the Swine Area

Type of Ability	Average Score Made by the Group
Manipulative ability	38.5
Ability to make managerial decisions	39.6
Ability to show why the information is true	44.1
Ability to recall information	51.2
Ability to locate relevant data	51.4
Ability to apply standards of performance	59.3
Ability to interpret relevant data	74.6
Ability to define terms	75.0

TABLE II
Summary of the Survey of Manipulative Abilities in Seven Major Areas of Technical Agriculture Possessed by Twenty-six Prospective Teachers of Vocational Agriculture in Ohio Previous to Their Entrance Into Student Teaching

General Area	Number of Essential Abilities Tested for	Weighted Average Scores Made by the Group Percent
Soils	15	33.0
Livestock	86	38.5
Fruit Growing	28	41.0
Field crops	49	42.4
Farm mechanics	310	56.0
Garden crops	51	59.0
Household mechanics	18	59.0

Vocational Agriculture Teacher Situation in California

BYRON J. McMAHON, Bureau Co-ordinator, California

ALTHO the teaching of vocational agriculture has been classified as an essential occupation by the Selective Service, approximately 43 percent of California's vocational agriculture teachers in 1942-43 were classified as 3-A or subject to draft as indicated by a survey that has just been completed by the California Bureau of Agricultural Education.

The survey was truly representative, as 236 out of the 254 teachers remaining on the job at the end of the past school year responded to the questionnaire that was distributed, the others having joined the services or gone into other agricultural work before the survey was completed.

The Problem

The Bureau of Agricultural Education in California was faced with a problem

It was assumed, that if a prospective teacher had performed a task a satisfactory number of times (set by the training teachers), he possessed the ability to perform that task. The trainees were asked to indicate on a survey form the number of times they had performed the various tasks up to the time they entered student teaching.

It was found that the group of 26 prospective teachers, on the average, possessed 51.01 percent of the 557 essential manipulative abilities in the various areas of technical agriculture. Individual scores ranged from 34.3 percent to 72.2 percent. The trainees showed a decided lack of experience in those activities closely related to the doing of good quality work such as "treating chickens for worms" and "using a strip cup to detect mastitis in dairy cows." Since teachers of vocational agriculture accept as their special duty the improvement of farmers and farm boys thru improved methods, the lack of these abilities was especially significant. The scores of the group of prospective teachers in the various areas of technical agriculture are shown in Table II.

The performance of the 26 prospective teachers, as indicated by the tests for the comprehensiveness of various abilities in the swine area and the survey of the comprehensiveness of manipulative abilities in many areas of technical agriculture, was extremely low. Since only about one-half of the abilities that prospective teachers should possess were possessed by the 26 trainees surveyed, it is the author's opinion that a program to improve these conditions should be undertaken.

Recommendations

The program of improvement will involve such procedures as:

1. Guidance of prospective teachers so that they may secure more adequate farm experience
2. Guidance of prospective teachers in their choice of courses
3. Assistance to subject matter departments in reorganizing the content of their courses
4. Further studies of this problem.

similar to that of every other state during the year 1942-43; namely, how to assist teachers to obtain deferment in order to remain in the agricultural teaching profession. As a result of our concern over this vital problem, J. A. McPhee, chief of the Bureau of Agricultural Education and state supervisor, requested every vocational agriculture teacher to fill out a form containing confidential information that could be used in properly presenting facts to local selective service boards. This information was then summarized by S. S. Sutherland, teacher-trainer, and the summary and conclusions may be of interest to readers of the *Agricultural Education Magazine*. A number of other facts were brought to light in addition to the information which we needed in connection with selective service relationships.

Altho a large number of teachers were classified as potential selectees, the actual number of teachers drafted has been rather low due to the favorable attitude of local selective service boards and the feeling of local communities that agriculture teachers were essential to maintain and increase food production.

Most of our teacher losses have been to other agricultural agencies, or into productive farming on their own farms. This condition could change materially in 1943-44 if there is a decided increase in the drafting of married men.

We will have no cadet teachers in training for replacement purposes and few, if any in sight, so that any teacher losses from now on will mean the loss of departments. Twelve departments have been dropped for the duration since July 1, 1943, due to the lack of replacements, and there will probably be an additional loss of seven or eight departments this fall.

Classification of Teachers

Our study showed that 15 out of 47 teachers in the 18-28 age group were

classified as 3-A; 62 out of 82 in the 28-38 age group were classified 3-A; while 23 out of 53 in the 38-45 age group were classified as 3-A (13 of this latter group were 3-A and 10 were 3-AH).

The number of dependents seemed to make very little difference as to whether a man was classified 3-A or not.

Some items of general information shown below concerning the participation of the various age groups in the OSYA and adult programs are of interest. This information which has been assembled should prove to be extremely valuable to us during the year 1943-44. It will enable us to show rather conclusively to selective service boards, both local and state, the extent of our vocational program and its stability. It also provides us with figures to show the extent to which our teachers are working with adult farmers in helping to solve their problems of "increased food production." This information has also proved valuable to us in showing local boards that the problem is not merely a local one but is state and nation wide as well.

The table below is one of several summaries that were made and is indicative of the type of information collected. Some of the other tables dealt with the age classifications of our teachers and other selective service information which would be primarily of interest to California.

Findings

Some of the conclusions that we have reached based on the table below are indicated here:

1. Only 62.6 percent of all California vocational agriculture teachers devoted full time to vocational agriculture. We are putting forth a concerted effort to raise materially this percentage during 1943-44, and we believe that this will show a marked increase.

2. This table indicates that the younger teachers were most active in the adult programs. The age group 28-38 had the highest number of OSYA classes per teacher (3.20) altho the 18-28 age group had the largest enrollment in the OSYA

(Continued on page 178)

TABLE I
GENERAL INFORMATION

Item	Age Group				
	18-28	28-38	38-45	Over 45	All Teachers
1. Number personal information forms summarized.....	47	82	53	53	235
2. Percent devoting full time to vocational agriculture.....	53	62.2	64.2	68.0	62.6
3. Percent with adult classes (OSYA and evening).....	87.2	80.5	86.8	66.0	80.0
4. Number of OSYA classes (average).....	3.02	3.20	2.74	1.96	2.78
5. OSYA enrollment (average).....	61.88	34.9	32.9	16.9	35.9
6. All-day vo-ag. enrollment (average).....	45.2	40.3	43.9	41.4	41.5
7. Percent with outside agricultural duties (War board, labor recruitment, etc.).....	21.3	26.8	28.3	13.2	22.9
8. Average salary	\$2,339.59	\$2,657.46	\$2,737.90	\$2,855.69	\$2,654.93
9. Number of years teaching vocational agriculture (average).....	2.18	7.44	14.24	17.33	10.18
10. Number of years tenure in present position.....	1.68	4.39	8.08	11.63	6.6
11. Percent with five or more years tenure present job.....	2.1*	41.4	69.9	81.1	48.9

*NOTE: 31 or approximately 70 percent of this age group are still on the same jobs in which they were originally placed.

Future Farmers of America

A. W. TENNEY

16th National Convention of Future Farmers of America

MEMBERS of the F.F.A. completed a very successful war convention held in Kansas City, Missouri, October 11-14. In attendance were delegates from 45 states, national officers, candidates for the American Farmer Degree, and boys who won outstanding honors. The purpose of this convention was to plan the war program of the Future Farmers of America for the crucial year ahead.

The accomplishment report presented at this 16th National Convention showed that "Future Farmers" have been actively engaged in the war effort during the past year. The following are some of their major achievements in this field of service to their country:

Total face value of War Bonds and Stamps purchased by chapters and individual members	\$4,889,406.48
Pounds of scrap metal collected by chapters	209,454,544
Pounds of paper collected by chapters	8,607,635
Pounds of rags collected by chapters	947,517
Pounds of rubber collected by chapters	10,337,749
Number of burlap bags collected by chapters	500,810
Number of members (associate and active) now serving in the armed forces	107,002
Number of Victory Gardens grown by F.F.A. members	87,294
Total acreage	61,838.63
Number of Victory Gardens grown by F.F.A. chapters	7,573
Total acreage	7,210.72
Number of F.F.A. members who helped Victory Farm Volunteers to become acquainted with farm life	25,899
Number of farm workers placed on farms thru the aid of the F.F.A.	28,587
Total number of farms serviced by Victory Farm Volunteers	22,231
Number of farm machines repaired by F.F.A. members	205,127

The War Production Board presented the following citation to the Future Farmers of America: "In acknowledgement of meritorious services rendered in behalf of the National Scrap Harvest, this citation is awarded to Future Farmers of America, Washington, D. C. Given under my hand this 31st day of December 1942. D. M. Nelson, Chairman."

It was announced at the convention

there are 6,745 F.F.A. chapters with a total membership of 208,292.

One of the highlights of the convention was the National Public Speaking Contest. The participants in this contest were as follows:

"Agriculture's New Frontier" by Howard Barlow, Bear River High School, Tremonton, Utah

"The Job of Vocational Agriculture" by Bob Meriwether, Paragould, Arkansas

"Food for Victory" by Richard Saunders, Monmouth Academy, Monmouth, Maine

"Warriors in Overalls" by William J. Kimball, Seymour, Wisconsin.

This contest was won by Howard Barlow of Tremonton, Utah.

Awards were presented to four boys who were designated as the Star American Farmers. Wayne Boothe of Cordell, Oklahoma, was selected as the Star Farmer of America. The following were designated as Star Regional Farmers: Edwin C. Fry, Gaithersburg, Maryland, Star Farmer—North Atlantic Region Frank O. Snyder, Kirkland, Illinois, Star Farmer—North Central Region

George Wilber Morse, Elk Grove, California, Star Farmer—Pacific Region. There were 148 members who received the American Farmer Degree, the highest degree conferred upon members of the Future Farmers of America. Twelve men who have contributed to the success of the organization were awarded the Honorary American Farmer Degree. They are as follows:

C. A. Nash, manager, Eastern States Exposition, Springfield, Massachusetts

M. L. Lyles, assistant to the president, The Atchison, Topeka and Santa Fe Railway System, Chicago, Illinois

E. J. Condon, assistant to the president, Sears-Roebuck and Company, Chicago, Illinois

Kirk Fox, editor, *Successful Farming*, Meredith Publishing Company, Des Moines, Iowa

J. G. Patton, president, The Farmers Union, 1441 Welton Street, Denver, Colorado

George P. Couper, California Polytechnic School, San Luis Obispo, California

Earl J. Cooper, livestock representative, *Country Gentleman*, 333 North Michigan Avenue, Chicago, Illinois

Henry E. Robinson, chapter adviser, Flathead F.F.A. Chapter, Kalispell, Montana

Bond L. Bible, chapter adviser, Bruceton Mills F.F.A. Chapter, Bruceton Mills, West Virginia

Benton Tomason, chapter adviser, Garber F.F.A. Chapter, Garber, Oklahoma

Leus Quinility, chapter adviser, Chataignier F.F.A. Chapter, Chataignier, Louisiana

Fred D. Trammell, chapter adviser, Bagdad F.F.A. Chapter, Bagdad, Kentucky.

In the National Chapter Contest the following chapters were selected as Gold Emblem Chapters, this being the highest rating given to "Future Farmers" chapters in this contest:

Garber, Oklahoma

Bruceton Mills, West Virginia

Bagdad, Kentucky

Stamping Ground, Kentucky

Chataignier, Louisiana

Flathead, Montana

Wayne Boothe

Star Farmer of America

THE honor of being elected the "Star Farmer of America" for 1943 was earned by Wayne Boothe of Cordell, Oklahoma.

Wayne graduated from the vocational agriculture department of the Cordell High School in 1942 where he made an outstanding record as a "Future Farmer," a leader, and a student.

His supervised farming program shows strong evidence that he has long planned to become established in farming and that he has not deviated from his goal. In 1936, with some money he had accumulated, Wayne bought two feeder pigs and some feed. With the returns from this small beginning in farming he bought a brood sow which farrowed 11 pigs. The sale of these hogs gave him enough operating capital so that he was able to buy 10 registered Shropshire ewes. In addition, he bought a cow and some bees and obtained land so that he could raise his own feed and have a more balanced farming program.

Getting Started

In 1939, Wayne branched into the beef business by feeding out his first steer. This enterprise has grown so that at the present time he owns 11 registered Short-horn cattle and has started a herd of dairy cows. During the past year he has filled out his list of needed farming equipment to operate the 320 acres of farm land which he has rented.

Each year Wayne has advanced in a well-balanced farming program so that now he shows a net worth statement of \$8,079.90. He completed the following projects during his high-school career: first year—19 head sheep, 32 head swine, 10 acres barley, two hives of bees; second year—19 head sheep, 21 head of swine, one beef steer, three dairy cows, and 10 acres of barley; third year—35 head of sheep, 16 head of swine, one beef steer, four dairy cows, 30 acres wheat, 20 acres barley, 20 acres oats, and 10 acres of Kaffir; fourth year—59 head of sheep, 39 head swine, six head beef cattle, five head dairy cattle, 100 head poultry, 20 acres cotton, 80 acres wheat, 30 acres barley, 20 acres oats, 10 acres of soybeans, and two acres of garden.

Since graduation from high school his farming program consists of 156 head sheep, 56 head swine, 11 head beef cattle, 100 chickens, 81 acres wheat, 51 acres

Training Teachers

(Continued from page 171)

a unit for a regular class which includes other units of the usual nature. The commodity production courses have demonstrated the need for emphasis on the practical in the production of crops and livestock. The teacher who sees no need for the organization of evening classes of this type in the postwar period may well question whether he has kept up with the new developments in technical agriculture.

Teacher Qualifications

What qualifications must the teachers in the postwar period possess? The answer to this second question is found partly in the answer to the first. The policy and possibilities with respect to the employment of special teachers will be an important factor. If the need is sufficiently great, funds will doubtless be found. To secure such teachers may be a more difficult problem when capable mechanics, made available by the wholesale closing of service departments of garages, return to their original jobs. Teachers of agriculture who have remained on the job have, for the most part, grown with the program. Many of them are capable of doing many things they could not do two years ago.

Unfortunately, according to the recent study of the Office of Education, we have lost 49.3 percent of our white teachers of agriculture and 34.3 percent of Negro

barley, 20 acres cotton, 21 acres oats, and 38 acres of Kaffir.

Leadership

Wayne showed evidence of leadership when he was elected watch dog of the local chapter during his freshman year and later was elected to the office of reporter, vice president, and president of his chapter by his fellow "Future Farmers." In 1942 he was elected state secretary and in 1943 he was elected to the office of President of the Oklahoma Association of Future Farmers of America.

He has been a member of many livestock judging teams and his ability as a judge is indicated by his winning first individual in local, state, and national contests.

In co-operative activities of the local chapter, he has taken a leading part in its promotion and development. In addition, Wayne has not confined his leadership to the Future Farmers only but has taken an active part in regular school activities, such as athletics, plays, class affairs, and musical organizations. He has been a leader in his Sunday School class. Since graduating from high school and the renting the farm, he has been an active co-operator with the Soil Conservation Service, Agricultural Adjustment Agency, Production Credit Association, and a member of the American Shorthorn Breeders Association, and Washita Wool Growers Association. He is vice-president of the Washita County Livestock Association.

Since that day in 1936 when he started with two small pigs, this young man has traveled a long way on the road to establishing himself as an independent farmer.

teachers in the past two years. Replacements must eventually, and as soon as possible, be as well prepared as the best. And this preparation must include more adequate training in farm shop, the operation of community canning centers, and a thorough knowledge of up-to-the-minute technical agricultural practices. In addition the teacher must be better informed concerning the aims of education in general and must have the ability to integrate his program with that of the comprehensive high school that is rapidly developing under the leadership of our educational administrators.

Finally, what procedures should be followed to prepare teachers of agriculture properly for their jobs? Obviously our teacher-training programs are going to be in need of some overhauling. The problem falls into two major divisions: (1) the retraining of former teachers, and (2) the training of new teachers. A possible third division may consist of certain emergency teachers who have shown unusual promise. Altho the percentage in this group will be relatively small in most states, definite plans should be made to meet their needs. In Virginia, for example, there are some 15 or 20 such men who have been successful and want to meet the requirements for certification on a permanent basis. Obviously the quickest way for them to do this would be to secure a leave of absence and return to the teacher-training institution for such additional work as may be necessary. In some cases it may be practicable to employ a qualified returning teacher to serve as a substitute. If, for personal reasons, the emergency teacher can not do this, regular attendance at summer school for two, four, or six weeks periods might be arranged. Teacher-trainers would then have to provide short intensive courses to meet their needs. Subject matter departments will usually co-operate in such undertakings to the limit of their staffs and facilities.

Type of Teacher Education Needed

Any teacher who has been in the armed forces for one year or more will need both technical and professional instruction before he returns to the job. A minimum of one quarter or one semester in full-time residence at the agricultural college may be needed for most of them. Teacher-trainers will be charged with the responsibility of providing for their needs. For those who may not require this amount of refresher training, provision might be made for them to spend from one to three weeks with selected teachers now in the service. Such a program would require close supervision by members of the teacher-training staff. Efficiency of instruction may be increased by organizing short, intensive instructional courses at various centers throughout the state. These centers might logically be selected on the basis of farming types of importance in the section.

In the training of new teachers the foregoing statements suggest many obvious needs. Without sacrificing the basic needs of trainees, some way must be devised whereby they may receive the necessary added instruction to meet the requirements for farm machinery repair and other specialized phases of shop work, the operation of canning centers, and the most approved methods in evening class instruction. The problem of giving an individual all the training he

needs for performing the services required of the agriculture teacher in a period of four years is almost a superhuman one. Moreover there are already indications that students in agricultural education are beginning to wonder whether the job isn't too big for the pay received. This feeling may be temporary but it will bear consideration. The accelerated college program has not helped the situation but has made it more complicated. Fortunately it is generally assumed that the conventional four-year program will be reverted to when the war is over, at least for agricultural colleges. Should this be done it may be possible to provide employment for student teachers during the summer following the junior year as assistants to men in service. The practical experience thus gained would be of inestimable value.

Another trend that may indicate a possible solution of the problem mentioned above is that of having an assistant to the agriculture teacher who is responsible for all shop instruction. Teacher-training departments may find it desirable to offer differentiated curricula in the junior and senior years to provide more adequate training for graduates who will be called upon to devote a major portion of their time to farm shop instruction while a second teacher in the same department carries the regular class work.

As usual, each state will work out its own solutions to the problems presented here. There will be no one best way. At the same time a widespread exchange of ideas during the coming months may help us all to avoid some trial and error procedures and hasten the time when postwar adjustments are completed, and the forces of vocational education in agriculture march on to victory in the peace as they have contributed to it in the war.

F.F.A. Does Co-operative Buying

PROVING again that co-operation pays, farmers and Future Farmers of the Isabella, Alabama, community saved \$426 by buying 152 tons of fertilizer jointly. In addition to a cash saving, the transportation from town was solved for this rural community.

Co-operative buying of these farm supplies began four years ago in connection with F.F.A. poultry projects. At that time, five tons of feed were bought co-operatively.

The following spring as a result of an evening school at Isabella conducted by J. H. Camp, local F.F.A. adviser, 12 farmers bought fertilizer co-operatively. Last year and this 29 were added bringing the total number buying fertilizer co-operatively to 41.

In addition to buying fertilizer, these farmers and Future Farmers have, during the three years, bought feeds, winter legume seed, seed oats, fruit trees, and other crop seed co-operatively. At the present time they are buying vetch, Austrian peas, superphosphate, and seed oats.

Understanding is the first great need in all human relations.—*Isben*

Supervised Farm Practice Program

(Continued from page 169)

this stage? We wish the boy to advance as fast as he can, but an expansion which will fail may be vocationally fatal.

All of this estimating, unless it is guess-work, requires careful search for facts. The records of previous projects in this area, the experience of successful farmers, farm management surveys, and similar records must be collected and analyzed. Trends and census data will indicate whether further expansion is advisable. A part of this will be worked out in the classroom and a part on the farm. The "course" begins at this point.

It is desirable to accumulate facts about boy labor. One example will illustrate this. A boy who had a very profitable acre of potatoes one year, proposed to raise 10 acres the following year. It seemed reasonable to multiply by 10 each item in his records of the first year. However, several difficulties arose, especially regarding the labor items. No labor charge for cutting the seed potatoes was on the record. He had just cut them at odd times. However, he realized that it would be real labor to cut the 150 bushels for 10 acres.

At this point, his question was presented to the other pupils and the estimate of the time required to cut one bushel ranged from 10 minutes to one hour. Statistical records were found which, for the moment, settled the question on a man-hour basis. Later, the entire class worked several times on large jobs, getting the skill while the teacher kept the record of each boy. The files of that class now include "boy hours, cutting potatoes."

Incidentally, this boy found that 10 acres was too much while he remained in school, so he compromised on five acres. The significant fact, which applies to our subject, is that the alert teacher guided the boy in making valid estimates and other members of the class profited in the discussion. This discussion could not be academic because the decisions were to be put in practice. This was one little item at school. The selection of the field, the tillage, and other practices were decided on the farm.

From the school point of view, the greatest value lies in the fact that the project compels the pupil to master his problems as fully as possible. A passing mark of 70 will not satisfy him and getting by the teacher's requirements will not suffice. Any degree of failure will be costly. This tends to keep each boy stretching to do his best, according to his ability. For the capable boys, this results in high scholarship, and for others of less scholastic ability the possibility of failure at school is remote. This tends to develop a desirable confidence in one's ability to succeed.

While we must admit that some of the important things which should be learned may not arise in any of the projects some years, we insist that they should be supplementary. Furthermore, unless they are used soon they will not function and will be forgotten. The supervised farm practice is the effective learning, and teaching exists only where there is learning. This is the one point to this article which purposely omits many important considerations regarding the supervised farm practice.

Maryland F.F.A. Members Aid in War Research

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MEMBERS of the Future Farmers of America have found many ways to aid the war effort. They have collected thousands of tons of scrap iron, rubber, paper, and rags; they have salvaged thousands of burlap bags; they have planted, cared for, and harvested many Victory Gardens; and they have invested thousands of dollars, earned thru their projects, in War Bonds and have sold many Bonds and Stamps to others. In Maryland they have found still another means of helping by collecting information to aid in war research.

Research Activities

Research in agricultural economics is a part of the official duties of the author. At the beginning of the present fiscal year he began working on a project requiring some definite information on the number, age, and condition of the farm machinery in Maryland. Many records were needed from all sections of the state. The scarcity of trained workers and restrictions on gasoline and tires meant it was impossible to gather the information direct from farmers, by members of the staff. Questionnaires were considered impractical. However the author, having had eight years of experience as a teacher of vocational agriculture, and since that time, a very close connection with the work thru his teacher-training duties, felt that this offered an opportunity for the F.F.A. members in the state to aid

in securing valuable information on this farm activity directly related to the war effort.

Every chapter of F.F.A. in the state was visited and prepared blanks to be used in the survey were explained to the advisers, who in turn explained them to the members of their respective chapters. Blanks were supplied to each chapter so that each member could provide the information requested for his home farm. Additional blanks were left with a chapter if they wished to expand the sample in their community. Chapters were encouraged to make a summary of the blanks for their community. This was done by most chapters and the information obtained was used in all-day classes and in organizing and conducting farm machinery classes in the Rural War Production Training Program.

The response of the F.F.A. members to this effort was gratifying. Over 1,500 records were gathered, making a sample of sufficient size on which to base estimates of the number, age, and condition of all farm machines and implements in the state.

Data Useful

The assistance rendered by the F.F.A. in conducting this economic wartime research is just another example of the many ways in which this organization of farm boys is aiding in the war program.

Teacher Situation

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program (61.88). The average number of OSYA classes for all teachers was 2.78 per teacher in 1942-43. It also shows that 80 percent of all agriculture teachers during 1942-43 taught OSYA or regular evening classes.

3. The study showed that 48.9 percent of all California agriculture teachers have had a tenure of five or more years in their present position. We found also that out of 53 individuals over 45 years of age reporting, the average has taught vocational agriculture for 17.33 years. This shows that there has been a real professional interest in the teaching of agriculture. The average length of tenure in their present position of men over 45 years of age proved to be 11.63 years, with the state average for all teachers reporting as 6.6 years, a rather significant figure.

4. The percent of teachers with outside agricultural duties, such as county war boards, labor recruitment, etc., shows 22.9 percent of all teachers participating. This is probably a low figure since practically all teachers have had a part in the volunteer labor recruitment during the summer of 1943. We also have a system of county key teachers in California, and the key teacher acts as the spokesman for all others in a given county, represents all of the teachers on the county USDA War Board, and similar groups. He then reports back to the teachers in

his county on his findings, and all of them indirectly participate in these activities.

5. The average salaries for teachers progresses steadily with the age groups up to the group over 45 years of age, and with a state average for 1942-43 of \$2,654.93. The salary average will be materially increased for the year 1943-44 because of salary increases ranging from \$150 to \$400 per year. The average tenure of teachers in the 45 or over age group was found to be 17.33 years for the 53 teachers who fall in that age group. Thirty-one or approximately 70 percent of the 18-28 year age group are still on the same jobs in which they were originally placed.

All in all our teachers are tending to remain long enough in a given position to develop really effective programs, and judging from our results in dealing with local selective service boards, local communities readily recognize when an agriculture teacher is really effective. In such cases the school trustees and people in the communities have gone "all out" to try to obtain deferment for the agriculture teacher to keep him on the job of helping to "increase food production." In most cases when the local communities took action, this was very effective. It is our hope that agriculture teachers who have been doing satisfactory jobs will be left in their present positions for the duration consistent with the needs of the armed forces. Our teachers are all patriotic and want to participate in whatever they can do best to help win this war in the shortest possible time.

